

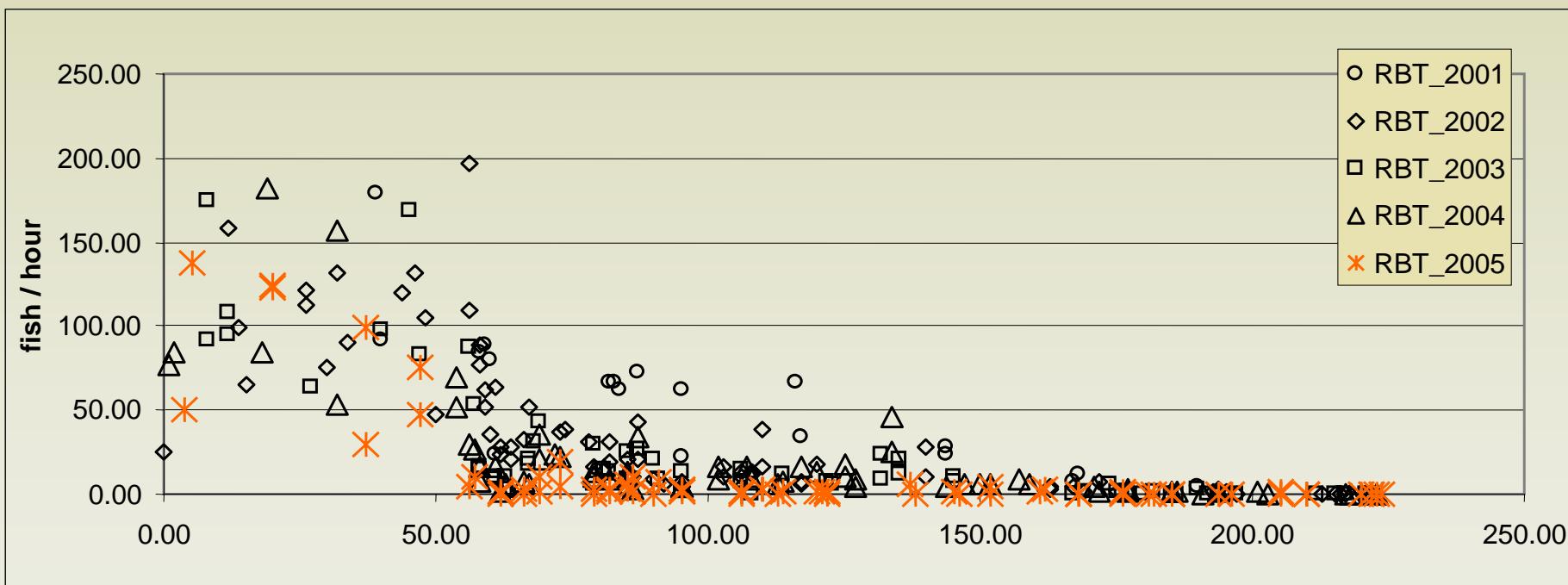
Electrofishing in the Grand Canyon, 2000-2005 , Status and Trends





Rainbow trout

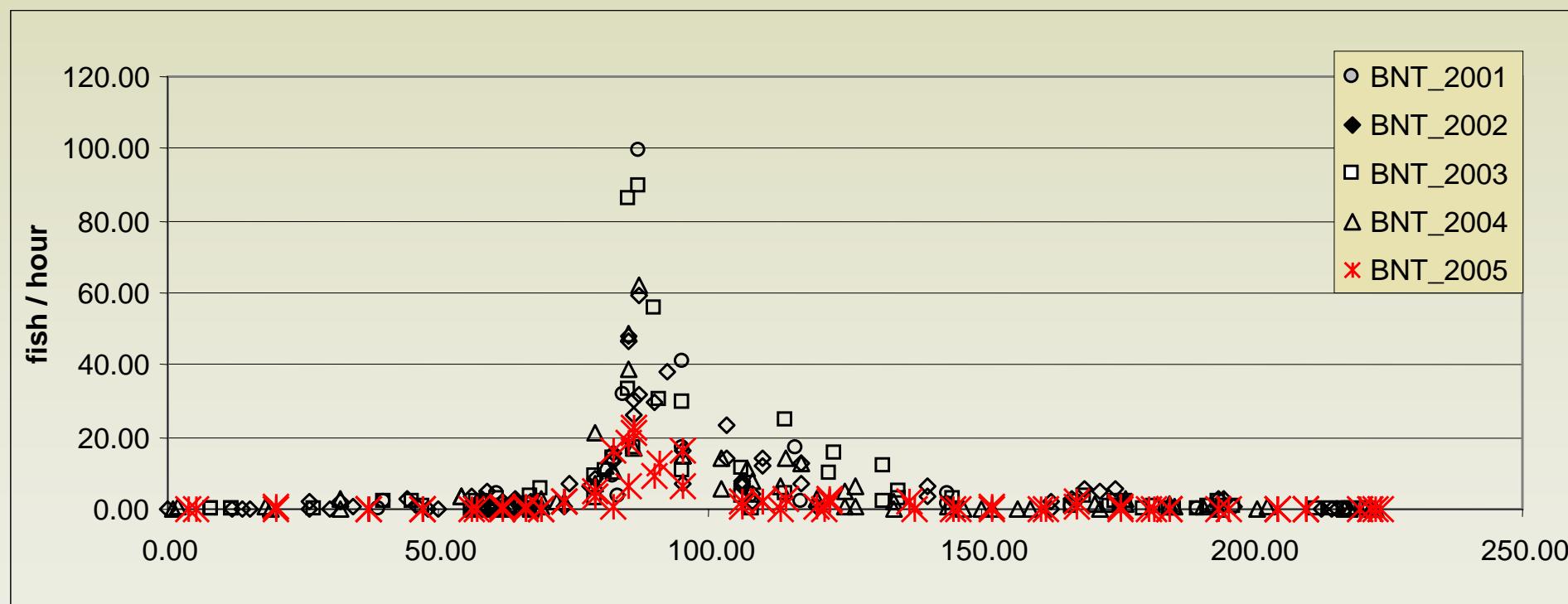
Mean CPUE (fish/hour) for rainbow trout at individual sample sites in the Colorado River from Lees Ferry to Diamond Creek (long-term monitoring trips [2001-2005]). Each point represents an N of 8-15)





Brown trout

Mean CPUE (fish/hour) for brown trout at individual sample sites in the Colorado River from Lees Ferry to Diamond Creek (long-term monitoring trips [2001-2004]). Each point represents an N of 8-15)



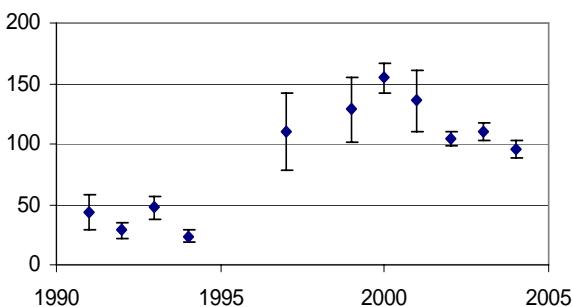


Rainbow trout

Mean CPUE (fish/hour) for rainbow trout in fish reaches (river mile 0 to river mile 230)

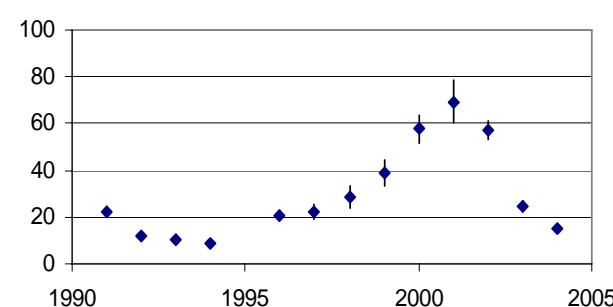
MEAN CPUE (0-56 mi)

bars represent standard error



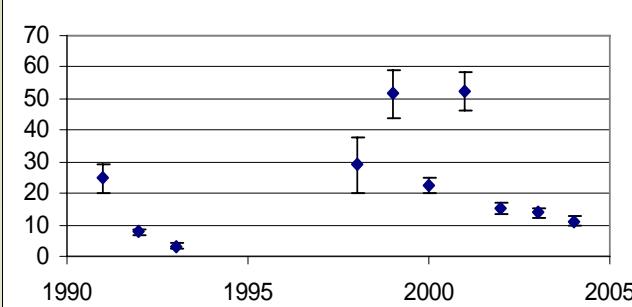
MEAN CPUE (57-77 mi)

bars represent standard error



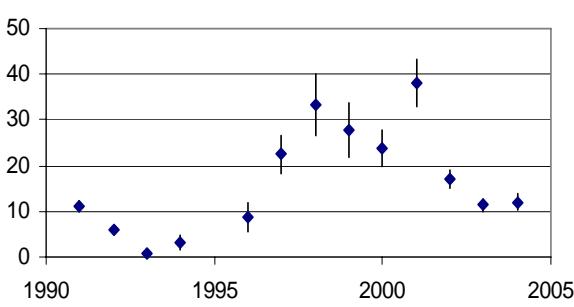
MEAN CPUE (80-98 mi)

bars represent standard error



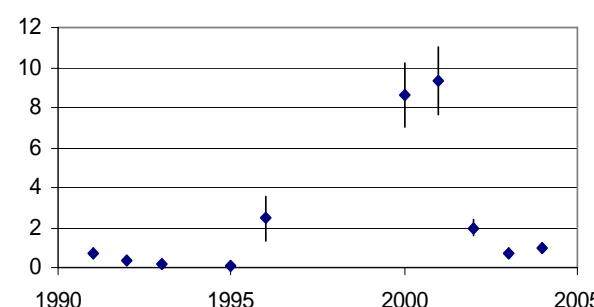
MEAN CPUE (110-160 mi)

bars represent standard error



MEAN CPUE (161-230 mi)

bars represent standard error



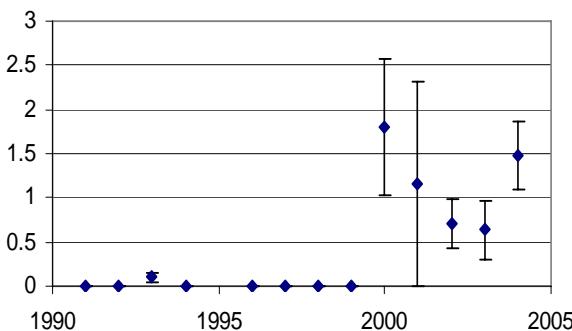


Brown trout

Mean CPUE (fish/hour) for brown trout in fish reaches (river mile 0 to river mile 230)

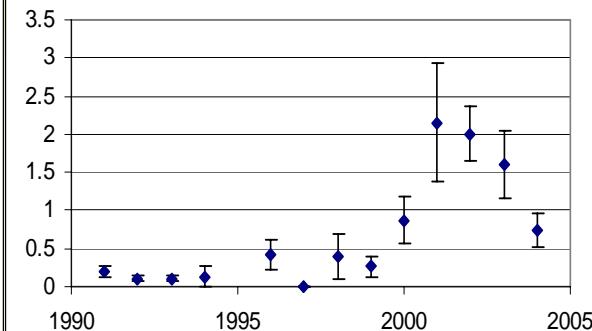
MEAN CPUE (0-56 mi)

bars represent standard error



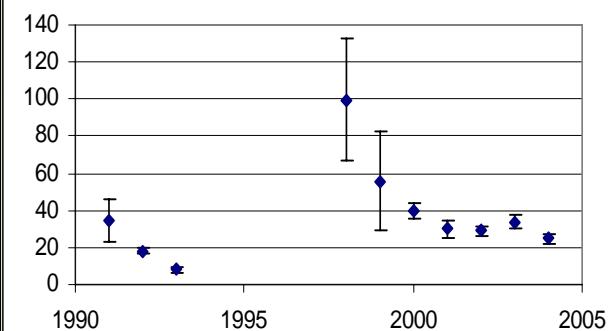
MEAN CPUE (57-77 mi)

bars represent standard error



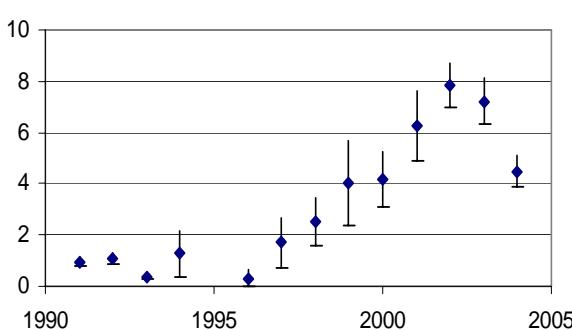
MEAN CPUE (80-98 mi)

bars represent standard error



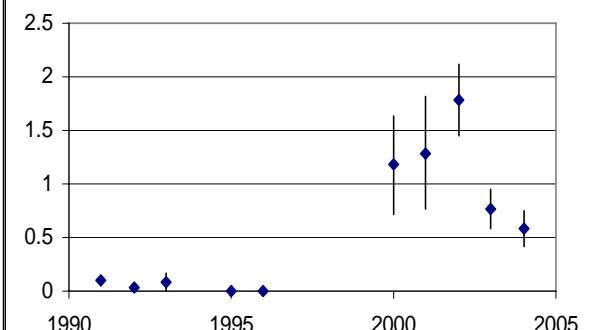
MEAN CPUE (110-160 mi)

bars represent standard error



MEAN CPUE (160-230 mi)

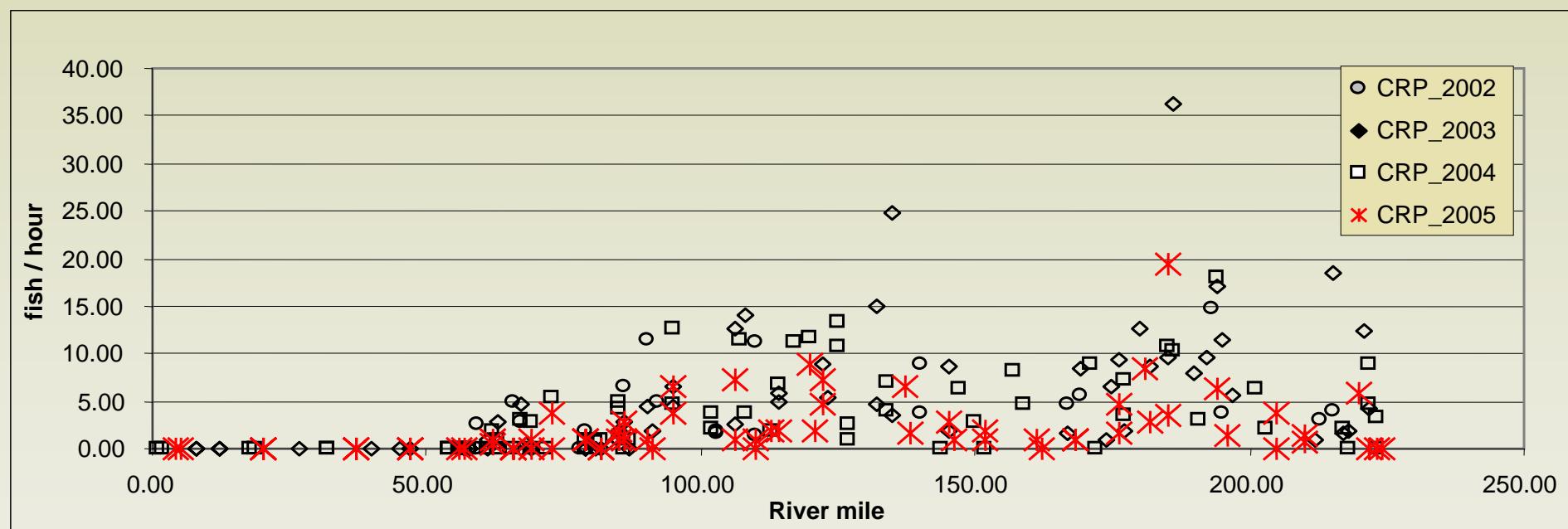
bars represent standard error





Common carp

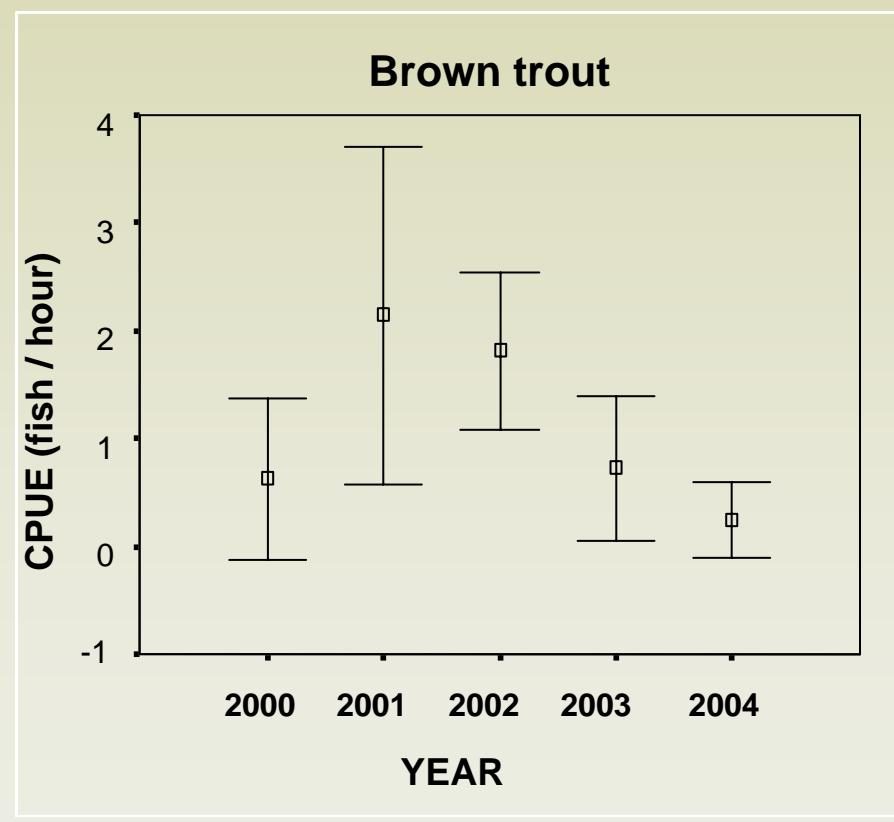
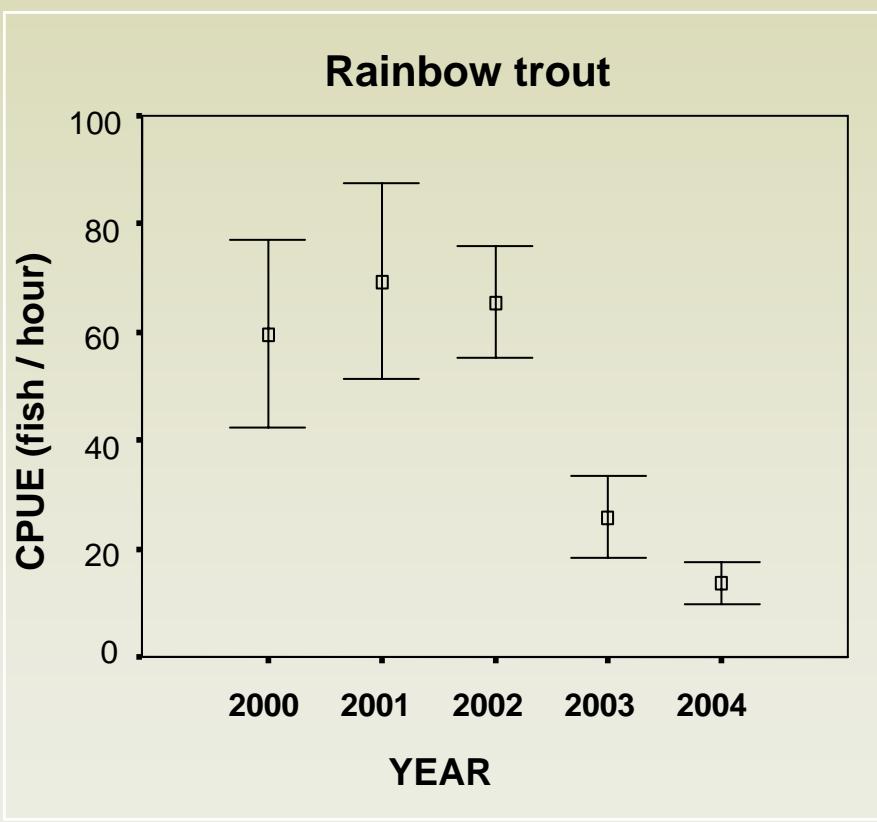
Mean CPUE (fish/hour) for common carp at individual sample sites in the Colorado River from Lees Ferry to Diamond Creek (long-term monitoring trips [2001-2004]). Each point represents an N of 8-15)





Little Colorado River removal reach

Mean electroshocking CPUE for rainbow trout and brown trout in the Little Colorado River removal reach (Colorado River, river miles 56-65.5) for the years 2000 -2004 (error bars = 95% CI).



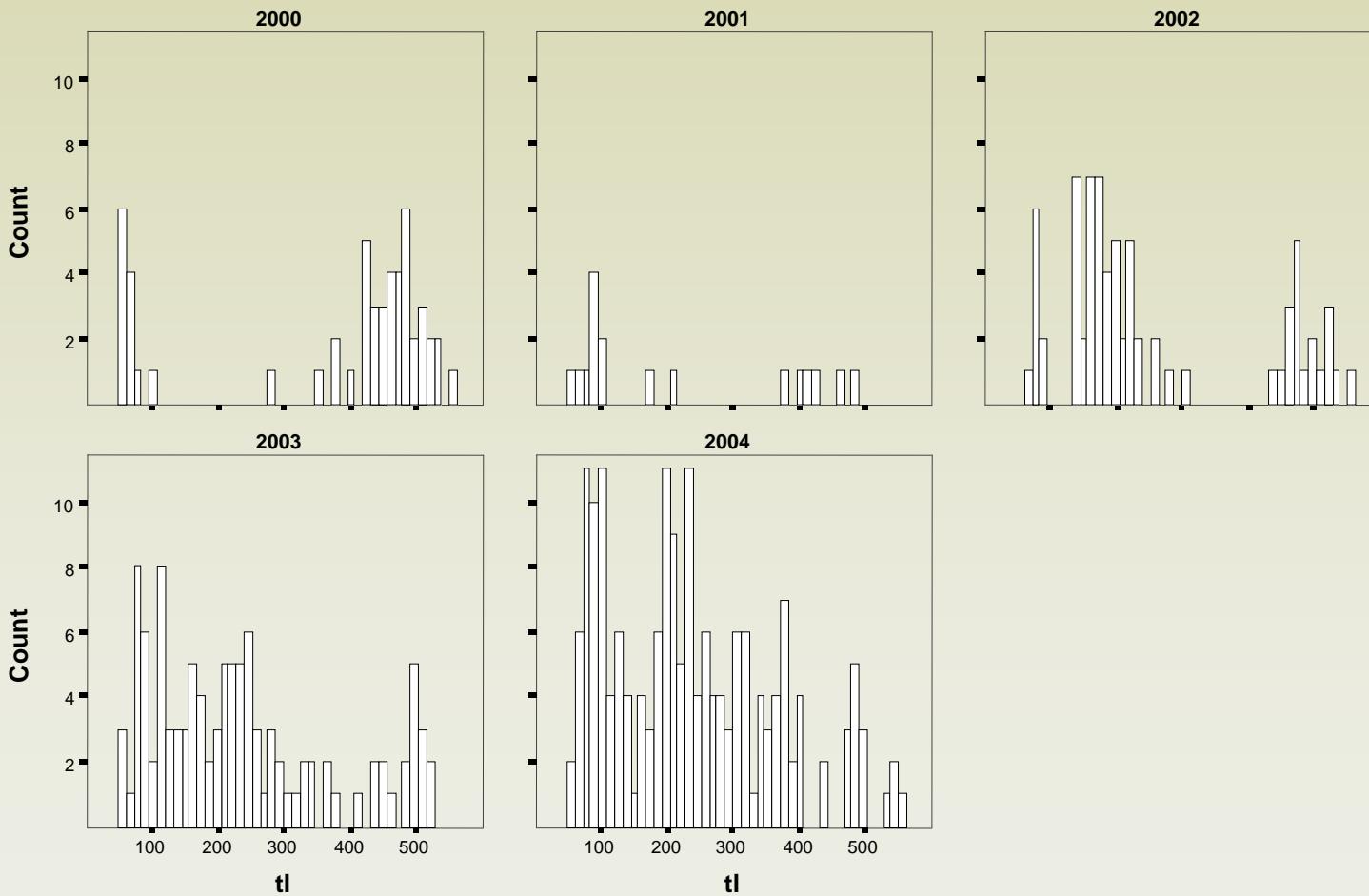
Flannelmouth suckers





Flannelmouth sucker length

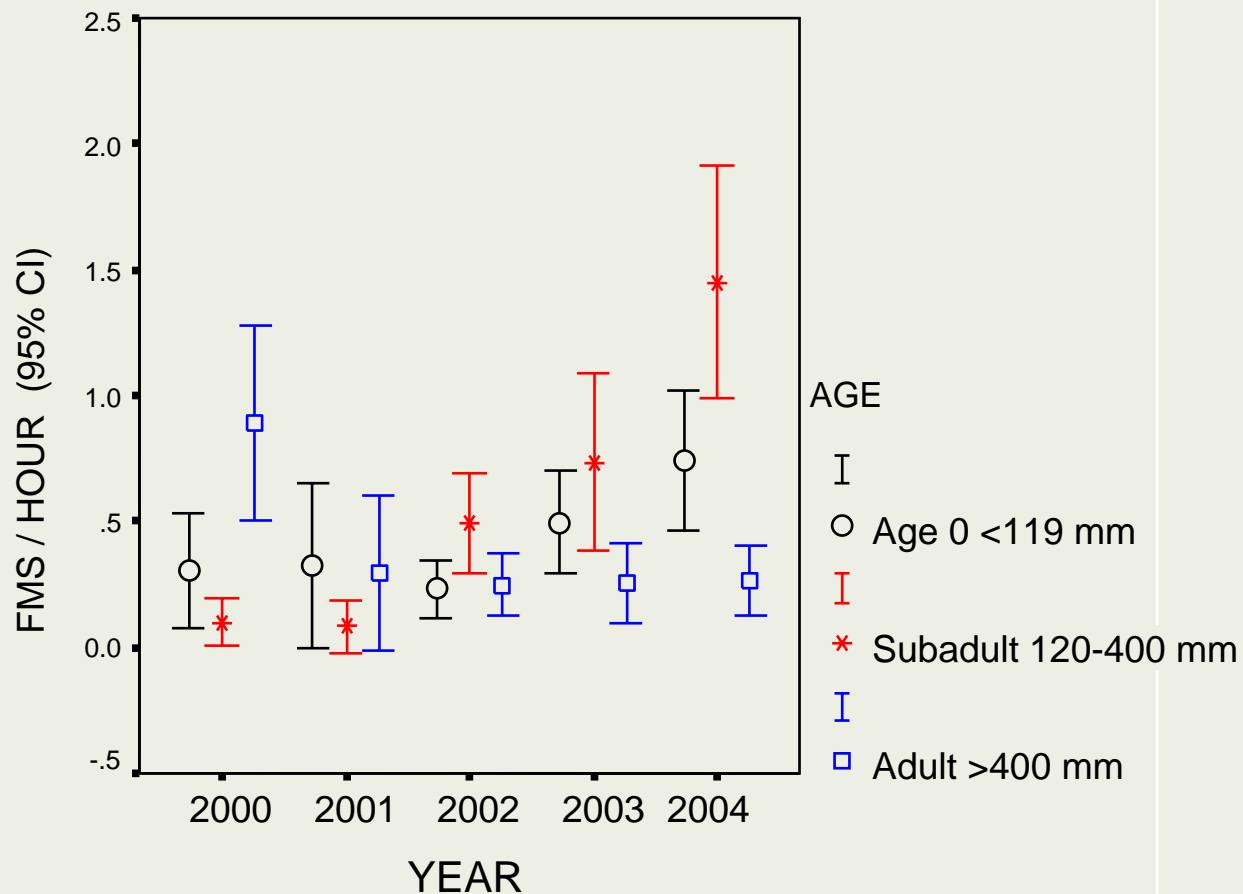
Length histograms (total length) by year (2000-2004) for all flannelmouth suckers captured by electroshocking in the Colorado River (River mile 2-225.5). Effort has remained relatively consistent over these years.





Flannelmouth sucker

Mean CPUE (fish/hour) for flannelmouth sucker life stages
(2000 – 2004) Colorado River Grand Canyon (River Mile 1-230).





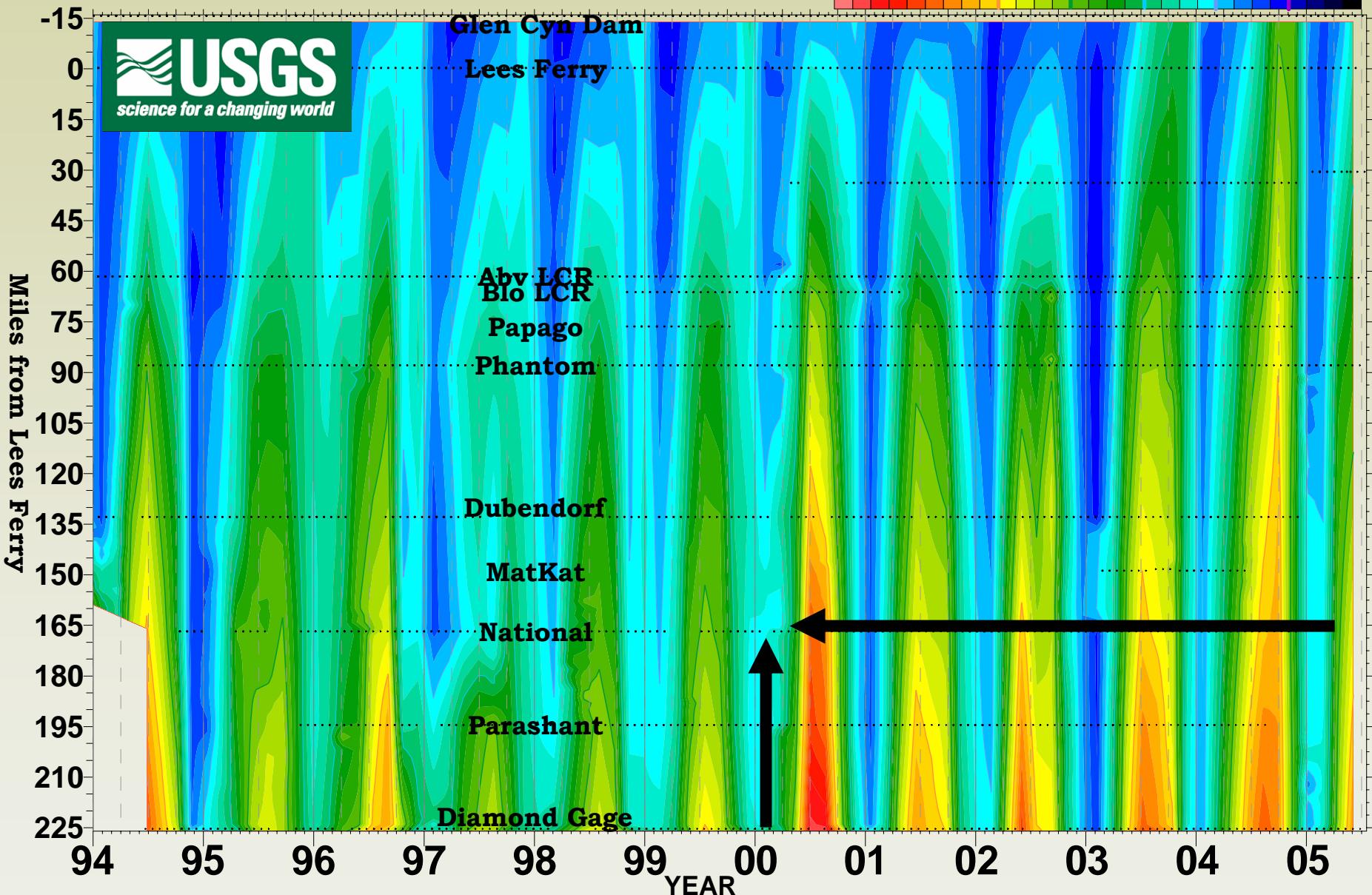
Flannelmouth sucker

Mean CPUE (fish/hour) for flannelmouth sucker in Logistic reaches.



Grand Canyon Colorado River Temperatures (°C)

August 1988 to July 2005





Diamond down (RM 228-260)

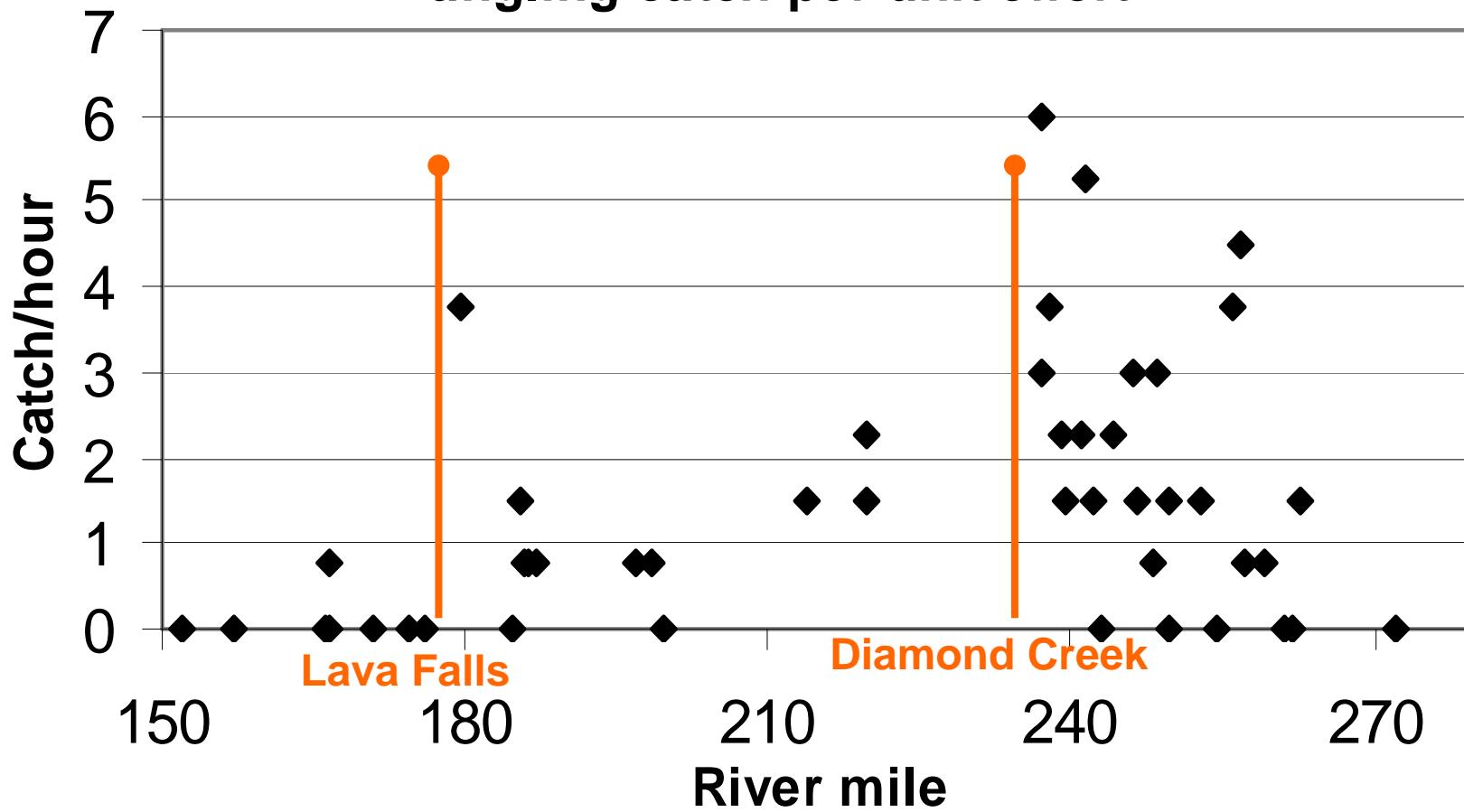
June-July 2005

DATE	RM	CRP	FMS	SPD	FHM	RSH	CCF	STB	SMB
5/31/05	228	1	1	4				3	
5/31/05	228	1	7	7				2	
6/1/05	240		2	6		12			
6/1/05	240	4		2		9	3	2	
6/2/05	246	2	1	2	1	18		3	1
6/2/05	246	1	2	5		11		10	
6/3/05	244		3	1		12		1	
6/3/05	244	8		1		7		3	1
6/4/05	262	1	2	2	2	7		1	
6/4/05	261	4	12		1	2	2	6	
6/5/05	257	1	11			2		4	
6/5/05	257	7	15	2	2	1	3	7	1
TOTAL		30	56	32	6	81	8	42	3



2005

Catfish angling catch per unit effort



Thank You

Robust long-term monitoring of aquatic populations is important to adaptive management programs because it characterizes a “baseline” or antecedent context in which response of biota to changing management policies or experiments can be interpreted.

(Walters and Holling 1990; Thomas 1996; Walters 1997).

